Zambia Global School Health Survey - 2004

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ACRONYMS

WHO	World Health Organization
CDC	Centre for Disease Control
CSO	Central Statistical Office
GSHS	Global School Health Survey
UNAIDS	United Nations Programme on HIV/AIDS
ARI	Acute Respiratory Infections
STIs	Sexual Transmitted Infections
SHN	School Health and Nutrition
MoE	Ministry of Education
CBoH	Central Board of Health
MOH	Ministry of Health
CI	Confidence Intervals
HIV	Human Immuno deficiency Virus

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Executive Summary

The Global School Health Survey (GSHS) was conducted in 2004 for the purpose of collecting accurate data on health behaviours and protective factors among school going children grade 7 to 10.

The survey was done in all the nine provinces of Zambia. A sample size of 50 schools was selected out of which 47(94%) schools participated.

The 2004 Zambia GSHS employed a two-stage cluster sample design to produce a representative sample of students in grades 7, 8, 9 and 10. The first-stage sampling frame consisted of all schools containing any of the above grades. Schools were selected with probability proportional to school enrollment size.

The second stage of sampling consisted of randomly selecting classes (using a random start) from each participating school. All classes in each selected school were included in the sampling frame. All students were eligible to participate in the GSHS.

During the 2004 Zambia GSHS, a total of 3,021 students were eligible but only 2,257 students participated (75%) giving an overall response rate of 70%. The weighted demographic characteristics of the sample are as follows:

Males	54.2%
Females	45.8%
Grade 7	56.0%
Grade 8	20.9%
Grade 9	21.1%
Grade 10	2.0%

The Zambia GSHS questionnaire addressed the following topics; Age and Sex, Weight, Height and going hungry, Dietary behaviors, Personal hygiene, Water, Physical violence, Injuries, Bullying, Personal safety, Feelings and friendship, Alcohol abuse, Drug abuse, Sexual behaviors and HIV/AIDS, Physical activity, Leisure time, Experiences at school.

The survey revealed that nutritional deficiencies as a result of food insecurity (protein-energy malnutrition, iron, Vitamin A, and iodine deficiency) affect school participation and learning (6). A total of 28.7% of students, 26.7% male and 30.6% female went hungry most of the time or always during the past 30 days because there was not enough food in their home. The grade 7 students [29.8%, CI (26.5-33.1)] were significantly more likely to go hungry than grade 9 students [21.9%, CI (17.8-26.0)] and among the grade 8 students, males [24.6%, CI (21.6-27.6)] were significantly less likely to go hungry than females [35.6%, CI (30.3-40.8)].

In developing countries, many children do not have access to clean water and thus, are susceptible to diseases such as diarrhea, dysentery, cholera etc. According to the survey, 12.5% of the students with 13.7% males and 10.7 % females never or rarely washed their hands before eating

during the past 30 days. While 23.8% reported to have no place to wash their hands before eating at school with 23.7% being males and 23.6% being females. This poses a great challenge to both the Ministries of Health and Education in addressing these issues.

In Zambia like indeed other countries alcohol and other drug abuse has resulted in both uncalled for injury, death, loss of property as well as violence and engagement into myriad risky behaviors. This may include use of tobacco, unprotected sex etc. The overall percentage of lifetime drug use (using drugs, such as daga, ibange, or ichamba, one or more times during their life) is 36.7%. The survey revealed that the prevalence of alcohol use among students (i.e., drinking at least one drink containing alcohol on one or more of the past 30 days) is 42.6%.

In all the variables, the survey revealed that grade seven (7) pupils were more vulnerable than other grades and were the most indulgent.

Introduction

The Global School-based Student Health Survey (GSHS) was initiated in 2001 by the World Health Organization (WHO) in collaboration with UNAIDS, UNESCO and UNICEF, with technical assistance form the US Centres for Disease Control and Prevention (CDC). The goal of the Global Student Health Survey is to obtain systematic information from students and school personnel to support school health and youth health programmes. It is surveillance project which the Ministries of Education and Health in countries can use to periodically measure and assess the behavioural risk factors and protective factors in 10 key areas among young people aged 13 to 15. The 10 key areas included in the survey are alcohol and other drug use, dietary behaviours, Hygiene, Mental health, Physical health, Protective factors, Sexual behaviours that contribute to HIV infection, other STIs and unintended pregnancy, Tobacco use, Violence and unintentional injury. The 10 core questionnaire modules in the survey address causes of morbidity and mortality among young people.

The survey uses a self-administered questionnaire based on a standardized scientific sampling process and common school-based methodology that can be administered during one regular class period. The purpose of the GSHS is to provide accurate data to help countries advocate for resources for school health and youth health programmes and policies. The GSHS also allows international agencies, countries and others to make comparisons across countries and within countries regarding the prevalence of health behaviours and protective factors and helps in establishing trends that can be used in evaluation of school health and youth health promotion.

Since 2003, Ministries of Health and Education around the world have been using the GSHS to periodically monitor the prevalence of important health risk behaviours and protective factors among students. Zambia is among the countries that have implemented the GSHS. The GSHS was implemented in Zambia to supplement other surveys that have been used to measure the risk behaviours among school-aged youth.

A study conducted in Zambia on School Health and Nutrition highlighted many health and socio-cultural problems affecting school going children. The socio-cultural problems include early marriages, teenage pregnancies, and some aspects of traditional practices, child labour and substance abuse. The health problems include poor water supply and sanitation, reproductive health and poor school environment. Among the notable diseases that were prevalent were malaria, diarrhoea diseases, acute respiratory infections (ARI), eye and ear diseases, STIs, HIV/AIDs, fever, headache, worm infestation, vitamin A deficiency and anemia. (Luo et al 1997/1998, UNICEF 1997, SHN draft Policy, 2004)

In Zambia the health of the youth is a major challenge due to existing threats to health and education such as poverty, HIV/AIDS, Malaria, violence, alcohol and substance abuse, poor nutritional status and dietary habits, poor water and sanitation etc. The GSHS was therefore used to collect relevant information tailored to the Zambian situation. The results reveal unhealthy behavioural patterns and risks to health and education. Concerted efforts are required to implement integrated health programmes in order to improve the health status.

The Ministry of Education in Zambia pays special priority to school health in line with the perspective of the 2002 Dakar Conference on “Education for All”, the national Education policy and strategies and indeed the attainment of the Millennium Development Goals by 2015. The Ministry of Education is committed to achieve universal primary education by 2015, and ensure that all the boys and girls complete primary school

The Ministries of Education and Health will provide the necessary leadership to disseminate the key findings of the GSHS in Zambia in order to sharpen the existing policies, strategies and programmes on the nine (9) areas in the survey. The School Health and Nutrition (SHIN) Programme by the MOE, The Health Promoting Schools Initiative by the MOH/MOE, and the Youth Friendly Services programme by MOH and other programmes by various Ministries and non-governmental organizations provide entry points for addressing the problems facing school going children and youth. School Health programmes require multisectoral collaboration in implementing intervention that can significantly reduce the risk factors to health and improve behavioural patterns that promote health.

Methodology

The 2004 Zambia GSHS was a cross-sectional survey, which employed a two-stage cluster sample design to produce a representative sample of students in grades 7, 8, 9 and 10. The first-stage sampling frame consisted of all schools containing any of the above grades. Fifty (50) schools out of a frame of 4,621 government schools were selected to participate in the Zambia GSHS from all the 9 provinces using scientific random sampling. Fourty seven schools participated. Data collection was conducted in September 2004 for two weeks.

The second stage of sampling consisted of randomly selecting classes (using a random start) from each school to participate. All classes in each selected school were included in the sampling frame. All students in the sampled classes were eligible to participate in the GSHS.

A weighting factor was applied to each question to adjust for nonresponse and for the varying probabilities of selection.
A total of 3,021 students were eligible but only 2,257 students participated (75%) giving an overall response rate of 70%.
The weighted demographic characteristics of the sample are as follows:

Males	***54.2%***
Females	***45.8%***
Grade 7	***56.0%***
Grade 8	***20.9%***
Grade 9	***21.1%***
Grade 10	***2.0%***

Missing data were not statistically imputed. The software that was used took into consideration the sample design to compute prevalence estimates and 95% confidence intervals were used.

Data Collection.

Data was collected in 2004 within a period of two weeks and was done in such a way that student confidentiality was upheld by allowing for anonymity and voluntary participation as per research ethics requirements. Students completed the self-administered questionnaire during one classroom period and recorded their responses directly on a computer-scanable answer sheet. A team of 12 Survey Administrators drawn from Central Board of Health (CBOH), Ministry of Health (MOH) and Ministry of Education (MOE) conducted the data collection.

GSHS Questionnaire.

The Zambia GSHS questionnaire contained 89 questions addressing the following topics:

- Age and sex
- Weight and height

- Dietary behaviours and household food security
- Personal hygiene
- Water
- Physical violence
- Injuries
- Bullying
- Personal safety
- Feelings and friendship
- Alcohol abuse
- Drug abuse
- Sexual behaviours and HIV/AIDS
- Physical activity
- Leisure time
- Experiences at school

The core questions in the GSHS questionnaire numbered Q1 to Q54 were collected in all the participating countries. In addition, questions 55 to 89 were included specifically for Zambia. These questions addressed the last six topics above.

Data Processing and Analysis

Along side data collection, questionnaires were collected, counted and checked for errors. Missing data were not statistically imputed. The software that was used took into consideration the sample design to compute prevalence estimates and 95% confidence intervals were used.
Data was further processed and analyzed by CDC in Atlanta, USA and results sent back to Zambia for report writing.

Ethical Considerations

Permission to carry out the study was obtained from the Ministries of Health and Education. Informed consent to participate in the study was collected from school managers and students. Confidentiality was upheld by allowing for anonymity and voluntary participation as per research ethics requirements.

Results

The results are presented in single variation, taking into account the general picture prevailing either at global and regional levels. This was so in order to illustrate trends, including the magnitude of the problem. The following are the results of the study:

Demographics

The demographic characteristics of the sample are described in Table 1.

Table 1. Demographic characteristics of the sample *Zambia*, 2004.

	Sex		**Age**			**Grades**			
	Males	**Females**	**12 or younger**	**13-15**	**16 or older**	7	8	9	10
Zambia	54.2%	45.8%	10.7%	58..9%	30.4%	56.0%	20.9%	21.1%	2.0%

Dietary Behaviours

Young people, particularly school going children, are the most affected by nutritional problems due to high demand for nutrients required for growth and development. Additionally, children are prone to many diseases such as diarrhoea, worm infestations, malaria, measles and respiratory infections. These diseases reduce important nutrients necessary for the young people's growth and mental development.

The major nutritional problems of public health concern in Zambia are protein - energy malnutrition (PEM) and micro nutrient deficiencies (VAD, IDA and IDD). Food insecurity and high levels of poverty in the country has brought about increase levels of malnutrition among school going children.

Fruits and vegetables are good sources of complex carbohydrates, vitamins, minerals, and other substances important for good health. Dietary patterns that include higher intakes of fruits and vegetables are associated with several health benefits, including a decreased risk for some types of cancer (7).

Table 2. Dietary behaviours, by sex, Zambia, 2004.

	Overall % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Went hungry most of the time or always because there was not enough food in their home during the past 30 days	28.7 (26.8 – 30.7)	26.7 (24.3 – 29.0)	30.6 (27.3 – 33.9)
Often ate breakfast during the past 30 days	45.3 (41.3 – 49.3)	42.2 (37.5 – 46.9)	49.7 (45.1 – 54.3)
Usually ate fruit, such as oranges, bananas, mangoes or guavas, one or more times per day during the past 30 days	65.6 (61.8 – 69.4)	65.6 (61.6 – 69.7)	66.2 (61.9 – 70.6)
Usually ate vegetables, such as pumpkin leaves, rape or bondwe, one or more times per day during the past 30 days	74.8 (72.0 – 77.7)	76.1 (72.7 – 79.5)	74.5 (70.4 –78.5)
Ate fruits and vegetables five or more times per day during the past 30 days	31.4 (27.7 –35.0)	30.9 (26.5 – 35.4)	31.9 (27.7 – 36.0)
Usually drunk milk or eat milk products 3 or more times per day during the past 30 days	15.3 (12.9 – 17.8)	12.8 (10.0 – 15.7)	17.3 (14.4 – 20.1)
Usually drunk carbonated soft drinks such as Coca-cola, Fanta or Sprite during 2 or more times per day in the past 30 days	23.0 (20.5 – 25.5)	20.8 (17.9 – 23.6)	25.2 (21.8 – 28.6)
Ate at a fast food restaurant, such as McDonalds, Hungry Lion, or Shop rite 3 or more times per day, during the past 7 days	25.6 (22.7 –28.4)	23.5 (20.0 –26.9)	27.8 (24.2 – 31.5)
Taught in any of their classes the benefits of healthy eating during the school year	48.6 (44.4 – 52.8)	49.0 (43.3 – 54.7)	48.5 (43.9 – 53.1)
Taught in their classes how to make healthy meals and snacks during the school year.	38.5 (33.4 – 43.6)	37.2 (30.6 – 43.8)	40.1 (35.0 – 45.2)

*95% confidence interval.

The study showed low levels of nutrition status in the study population, a total of 28.7% of students, 26.7% male and 30.6% female indicated going hungry most of the time or always during the past 30 days because there was not enough food in their home.

The grade 7 students [29.8%, CI (26.5-33.1)] were significantly more likely to go hungry than grade 9 students [21.9%, CI (17.8-26.0)] and among the grade 8 students, males [24.6%, CI (21.6-27.6)] were significantly less likely to go hungry than females [35.6%, CI (30.3-40.8)].

Surprisingly a large percentage of the sample, 65.6% indicated they usually ate fruit, such as oranges, bananas, mangoes or guavas, one or more times per day during the past 30 days with male students at 65.6% and female students at 66.2%.

The consumption of vegetables was high at 74.8%. The vegetables eaten included pumpkin leaves, rape, or bondwe, this measurement was one or more times per day during the past 30 days. Male students made up 76.1% and female students 74.5%.

Contrary to the higher statistics of eating one or more fruits and vegetables per day in the last 30 days, consumption of fruits and vegetables more than five times per day was low at 31.4%. Male students formed 30.9% and female students 31.9%.

A low number of students at 15.3% usually drunk milk or ate milk products three or more times per day during the past 30 days with male students at 12.8% and female students at 17.3%.

A relatively higher percentage of 23.0% of students usually drunk carbonated soft drinks such as coca-cola, Fanta, or Sprite two or more times per day during the past 30 days with male students at 20.8% and female students at 25.2%.

Consumption of fast foods was high at 25.6%, this is food from such outlets like Nandos, Hungry Lion, or Shoprite. The measuring rate was consumption of such foods on three or more days during the past seven days. Of the total percentage male students were at 23.5% and female students at 27.8%.

Less than half of the students at 48.6% were taught in any of their classes the benefits of healthy food during the school year with male students at 49.0% and female students at 48.5%.

While only 38.5% of students were taught in any of their classes how to make healthy meals and snacks during the school year with male students at 37.2% and female students at 40.1%.

Hygiene

Hygiene refers to the state of general cleanliness and involves personal and environmental considerations such as availability of safe water and sanitary facilities. This study dwelt on dental hygiene, availability of safe water and hand washing practices. The study focused on how often pupils cleaned their teeth. It also explored the availability of hand washing facilities and behaviours towards the use of these facilities.

Oral health has far reaching consequences on health. Poor oral health practices can lead to various infections, tooth decay and loss. Dental caries are one of the most common chronic childhood diseases (8). Dental caries and other oral disease can affect the ability to eat, appearance, communication, overall health status, and the ability to learn. In both developed and developing countries, many children do not have access to water fluoridation or professional dental care. Daily tooth cleaning or brushing can help prevent some dental disease.

The study found that most of the students cleaned their teeth. A total percentage of students who did not clean or brush their teeth during the past 30 days was only 10.1% with male students at 10.3% and female students at 9.9%.

Availability of hand washing facilities as well as proper use of such facilities are strong determinants of health. Most Diarrhoea diseases are a result of the two factors. Diarrhoea diseases are most serious in developing countries and are reported to be responsible of killing 2 to 3 million children in developing countries every year (9).

It is established that hand washing with soap alone could cut such deaths by half. Hand washing enhances removal of excreta and leaves the hands free of disease causing organisms such as bacteria, viruses, and protozoa.

The study found that hand washing practices, before eating were high, only 12.5% of the students never or rarely washed their hands before eating during the past 30 days. Of this total percentage 13.7% were males while the females were 10.7%.

Hand washing practices after use of toilet was also high with only 15.2% reporting never or rarely washing their hands after using the toilet or latrine with male students at 15.4% and females students at 14.1%.

Use of soap was widely practiced with only 21.5% of students never or rarely using soap when washing their hands during the past 30 days, male students at 19.2% and females students at 22.1%.

The study revealed that hand washing facilities were widely available with only 21.9% of students not having a place to wash their hands after using the toilet or latrine at school with male students at 21.6 and female students at 21.9%.

Teaching of hand washing practices was high, 60.7% of students reported being taught in any of their classrooms the importance of hand washing with male students at 61.1% and female students at 60.6%.

On the availability of water 23.7% of students reported not having a proper source of clean water for drinking at school with male students at 22.4% and female students at 24.5%.

Availability of Hand washing facilities at school was wide, only 23.8% reported to have no place to wash their hands before eating. Of these 23.7% were males and 23.6% were females.

Table 3. Hygiene related behaviours, by sex, Zambia, 2004.

		Sex	
	Overall % (CI)*	**Male % (CI)**	**Female % (CI)**
Did not clean or brush their teeth during the past 30 days	10.1 (7.7 – 12.4)	10.3 (7.3 – 13.4)	9.9 (6.5 – 13.2)
Never or rarely washed their hands before eating during the past 30 days	12.5 (10.5 – 14.5)	13.7 (11.0 – 16.5)	10.7 (8.5 – 12.8)
Do not have a place to wash their hands before eating at school	23.8 (18.7 – 28.9)	23.7 (18.0 – 29.3)	23.6 (17.5 – 29.7)
Never or rarely washed their hands after using the toilet or latrine	15.2 (12.6 – 17.8)	15.4 (11.8 – 19.1)	14.1 (11.6 – 16.6)
Do not have a place to wash their hands after using the toilet or latrine at school	21.9 (16.9 –26.9)	21.6 (16.4 – 26.7)	21.9 (15.8 – 27.9)

Never or rarely used soap when washing their hands	21.5 (18.5 – 24.5)	19.2 16.3 – 22.2)	22.1 (18.5 – 25.8)
Taught in any of their classes the importance of hand washing during the school year	60.7 (56.1 – 65.4)	61.1 (55.7 –66.6)	60.6 (55.5 – 65.6)
Do not have a source of clean water for drinking at school	23.7 (18.5 – 29.0)	22.4 (16.1 – 28.7)	24.5 (19.5 – 29.5)

*95% confidence interval.

Violence, Unintentional Injury and Bullying

Injuries refer to various forms of being hurt either physically or emotionally. Physical injuries are those that occur on the body and may be caused by road accidents, being beaten, gunshots, falling from heights, being caught in a fire, drowning, electrocution the list is endless. These could be major causes of death and disability among school going children (36-37).

Every year, 750,000 children die from injuries. While 400 million children are hurt seriously. In 2000, an estimated 190,000 youth homicides (9.2 per 100,000 population) occurred globally. For every youth homicide, approximately 20 to 40 victims of non-fatal youth violence are hospitalised. Many injuries lead to permanent disability and brain damage.

Emotional injury is that which is not physical but psychological and affects the mind. Many factors may cause such injury. The study however only confined itself to trauma caused by bullying. Victims of bullying have increased stress and a reduced ability to concentrate and are at increased risk for substance abuse, aggressive behaviour, and suicide attempts (38).

Table 4. Violence and unintentional injury among students, by sex, Zambia, 2004.

	Overall % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Had a boyfriend or girlfriend hit, slap, or physically hurt them on purpose during the past 12 months	20.7 (18.2 – 23.2)	22.6 (19.3 – 26.0)	18.7 (15.5 – 21.9)
Ever been physically forced to have sexual intercourse when they did not want to	32.7 (29.5 – 35.8)	31.7 (28.5 – 34.8)	32.8 (28.4 – 37.1)
Were in a physical fight one or more times during the past 12 months	51.7 (47.8 – 55.6)	49.3 (43.9 – 54.6)	54.0 (49.2 – 58.8)
Were seriously injured one or more times during the past 12 months	70.3 (65.1 – 75.4)	68.0 (62.1 – 74.0)	72.0 (65.0 – 78.9)
Taught in any of their classes how to avoid physical fights and violence during this school year	40.7 (34.6 – 46.9)	42.6 (36.3 – 48.9)	40.6 (33.0 – 48.2)
Among students who were seriously injured during the past 12 months, those whose most serious injury happened to them while they were playing or training for a sport	15.6 (12.7 – 18.4)	15.8 (11.4 – 20.1)	15.1 (11.4 – 18.8)
Among students who were seriously injured during the past 12 months, those whose most serious injury was the result of a fall	23.1 (18.5 – 27.8)	23.1 (16.5 – 29.6)	24.6 (18.8 – 30.4)
Among students who were seriously injured during the past 12 months, those who most serious injury was the result of them hurting themselves by accident	33.1 (28.0 – 38.2)	38.0 (30.4 – 45.6)	27.9 (22.8 – 33.0)
Among students who were seriously injured during the past 12 months, those who had a broken bone or dislocated joint as their most serious injury	22.3 (17.7 – 26.8)	21.8 (15.8 – 27.7)	23.0 (18.4 – 27.5)
Were bullied on one or more days during the past 30 days	63.1 (58.8 – 67.3)	60.4 (54.5 – 66.4)	65.2 (60.0 – 70.4)
Among students who were bullied during the past 30 days, those who were bullied most often by being hit, kicked, pushed, shoved around, or locked indoors	21.7 (19.3 – 24.1)	21.5 (17.9 – 25.1)	21.7 (17.7 – 25.7)

*95% confidence interval.

The study revealed high levels of bullying among students with relationships, 20.7% of students had a boyfriend or girlfriend hit, slap, or physically hurt them on purpose during the past 12 months with male students at 22.6% and female students at 18.7%.

Sexual abuse was also found high, 32.7% of students reported having been physically forced to have sexual intercourse when they did not want to. Males were at 31.7% and females were at 32.8%.

Physical fights were also high as 51.7% of students with male students at 49.3% and females at 54.0% were in a physical fight one or more times during the past 12 months.

51.7% of students were involved in a physical fight, one or more times during the past 12 months with 49.3% males and 54.0% females. The grade 7 students [(57.4%, CI (51.3 – 63.4) were significantly more likely than grade 9 [(39.1%, CI (33.3-45.0)] to have been in a physical fight during this period.

The study revealed a high level of occurrences of physical injury, 70.3% of students were seriously injured one or more times during the past 12 months with male students at 68.0% and female students at 72.0%.

Less than half at 40.7%, of students were taught in any of their classes how to avoid physical fights and violence during this school year with male students at 42.6% are and female students at 40.6%

Among students who were seriously injured during the past 12 months, 15.6% were playing or training for a sport, 23.1% were injured by falling. 33.1% had injuries occurring as a result of hurting themselves by accident, and 22.3% experienced a broken bones or dislocation joint.

The survey showed that bullying among students was rampant. In all 63.1% of pupils reported to have been bullied one or more days during the past 30 days. Bullying was more prevalent among grade 7 pupils [(68.5%, CI 57.4 – 79. 6)] than was among grade 9 pupils [(51.9%, CI 45.1 – 58.8)]. There were no significant differences in bullying among boys and girls. Bullying was mostly by way of pupils being hit, pushed, shoved around, or locked in-door. (21.5% males, 21.7% females)

Table 5. Personal Safety among students, by sex, Zambia, 2004.

	Overall % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Most of the time or always used a seat belt when riding in a car or other motor vehicle driven by someone else during the past 30 days	21.7 (19.2 – 24.2)	22.6 (19.0 – 26.1)	19.8 (17.3 – 22.2)
Most of the time or always wore a helmet when riding a bicycle or other non-motorised vehicle during the past 30 days	18.6 (16.7 – 20.6)	17.8 (15.1 – 20.4)	20.1 (17.6 – 22.6)
Rode in a car or other motor vehicle driven by someone who had been drinking alcohol four or more times during the past 30 days	16.9 (13.6 – 20.1)	14.4 (10.7 – 18.1)	18.2 (14.6 – 21.8)
Taught in any of their classes how to avoid or prevent motor vehicle accidents during this school year.	43.8 (38.6 – 49.0)	41.6 (35.7 – 47.6)	45.9 (40.4 – 51.4)

*95% confidence interval.

The study found low use of seat belts among students, a total of 21.7% with male students at 22.6% and female students at 19.8% used a seat belt most of the time or always when riding in a car or other motor vehicle driven by someone else during the past 30 days

Use of helmets when riding a bicycle or other non-motorised vehicle during the past 30 days were low at 18.6% out of which 17.8% were males and 20.1% females.

The study found a high risk of exposure to road accidents as 16.9% of students rode in a car or other motor vehicle driven by someone who had been drinking alcohol four or more times during the past 30 days with male students at 14.4% and female students at 18.2% .

Less than half of the respondents at 43.8% were taught in their classes during this school year how to avoid or prevent motor vehicle accidents with male students at 41.6% and female students at 45.9%.

Mental Health

Mental health refers to the state of being mentally sound, it also refers to the ability of an individual to cope and adapt to the demands of life and the changing meaning of life itself. In most cases when individuals are psychologically and socially challenged they resort to all sorts of behaviours to cope with the challenges and stresses.

Anxiety disorders, depression and other mood disorders, and behavioural and cognitive disorders are among the most common mental health problems among adolescents. Every country and culture has children and adolescents struggling with mental health problems.
Most of these young people suffer needlessly, unable to access appropriate resources for recognition, support, and treatment.

Ignored, these young people are at high risk for abuse and neglect, suicide, alcohol and other drug use, school failure, violent and criminal activities, mental illness in adulthood, and health-jeopardizing impulsive behaviours. Depression during adolescence and young adulthood is recognized increasingly as an important public health and social problem. Worldwide, about 4 million adolescents attempt suicide annually, resulting in at least 100,000 deaths (10-12).

In this area the study dwelt on, loneliness, being worried, hopelessness, suicidal ideas and friendships.

The study revealed wide existence of loneliness, 24.1% of students with 22.4% being male and 25.8% being female reported that they were most of the time or always felt lonely during the past 12 months.

Among the grade 8 students, females [24.8%, CI (19.6-30.0)] were significantly more likely than males [15.8%, CI (12.8-18.9)] to feel lonely most of the time or always during the past 12 months.

Levels of being worried were also high with 26.4% of students reporting that they were most of the time or always felt so worried about something that they could not sleep at night during the past 12 months with male students at 25.0% and female students at 27.7%.

Levels of hopelessness were very high with 53.3% of students feeling so sad or hopeless almost every day for two weeks or more in a row that they stopped doing their usual activities during the past 12 months with male students at 51.6% and female students at 53.7%

The study revealed unsettling findings on suicide, 31.9% of students, 31.4% being male and 31.5% female, seriously considered attempting suicide during the past 12 months. What is more the findings show that, 41.4% of students made a plan about how they would attempt suicide during the past 12 months with male students at 40.4% and female students at 41.7%.

15.7% of these students with 14.9% males and 15.6% females have no close friends at all.

Table 6. Mental health issues among students, by sex, Zambia, 2004.

	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Felt lonely most of the time or always during the past 12 months	24.1 (21.7-26.6)	22.4 (18.8 – 26.1)	25.8 (22.6-29.0)
Most of the time or always felt so worried about something that they could not sleep at night during the past 12 months	26.4 (24.0 – 28.8)	25.0 (23.1 – 26.9)	27.7 (23.8 – 31.6)
Felt sad or hopeless almost every day for two weeks or more in a row that they stopped doing their usual activities during the past 12 months	53.3 (50.0 – 56.6)	51.6 (47.1 – 56.2)	53.7 (49.9 – 57.4)
Seriously considered attempting suicide during the past 12months	31.9 (28.0 – 35.8)	31.4 (27.0 – 35.9)	31.5 (26.7 – 36.3)
Made a plan about how they would attempt suicide during the past 12 months	41.4 (37.6 – 45.3)	40.4 (34.6 – 46.1)	41.7 (37.7 – 45.8)
Have no close friends	15.7 (13.5 – 17.9)	14.9 (12.3 – 17.5)	15.6 (12.2 – 19.0)

***95% confidence interval.**

Alcohol and Other Drug Use

Worldwide, alcohol is considered as a socio drink in the community. As such children tend to abuse it. The use of alcohol worldwide causes 3% of deaths (1.8 million) annually, which is equal to 4% of the global disease burden.

Besides the direct effects of intoxication and addiction, alcohol use causes about 20% to 30% of esophageal cancer, liver disease, homicide and other intentional injuries, epilepsy, and motor vehicle accidents worldwide (1). In most countries, alcohol-related mortality is the highest among 45- to 54-year-olds, but the relationship between the age of initiation of alcohol use and the pattern of its use and abuse in adulthood makes the study of alcohol consumption among adolescents important (2).

While adverse health consequences from long-term chronic alcohol use may not cause death or disability until fairly late in life, acute consequences of alcohol use, including intentional and unintentional injuries, are far more common among youth and young adults. Unintentional injuries are the leading cause of death among 15 to 25-year-olds and many of these injuries are related to alcohol use (3). Young people who drink are more likely to use tobacco and other drugs and engage in risky sexual behaviour, than those who do not drink (4).
Problems with alcohol can impair adolescents` psychological development and influence both the school environment and leisure time negatively (5).

In Zambian, alcohol and other drug abuse is on the increase, this is more so among the youth. Studies show that the youth are engaging in alcohol consumption at an earlier age now than ten years ago.

Various reasons have been suggested for this development, among them are the viciously high school dropout rates. This leaves most of the youth roaming the streets and hence engaging in alcohol and drug abuse. Inadequate employment opportunities have also contributed to this. The ever-growing rural urban population drift does not help this.

In Zambia like indeed other countries alcohol and other drug abuse has resulted in both uncalled for injury, death, loss of property as well as fights and engagement into a myriad risky behaviours. This may include use of tobacco, unprotected sex etc. Apart from causing harm indirectly alcohol and drug abuse has been known to cause death by biologically harming the health of the consumer. A section on alcohol and drug abuse had to be included in this study of school going youth.

Notable from the survey also was the indulgence by grade 7s in activities to do with alcohol. About 42.1% of students who were 13 years old or younger when they had their first drink of alcohol were in grade 7. Also, more grade 7s, drunk one or more drinks, per day on the days they drank alcohol, (29.1%) as compared to the Grade 9s (21.1.) during the past 30 days. Overall, 27.1% of students drank one or more drinks per day on the days they drank alcohol during the past 30 days with male students at 24.5% and female students at 28.9%.

In addition, 12.9% (9.7 – 16.2) of students who usually got the alcohol they drank by buying it during the past 30 days were grade 7s, 12.9% (CI, 9.6 – 16.2) as opposed to the 5.7% (CI, 3.7 - 7.7) and 7.0% (5.4 - 8.7) grades 8 and 9 respectively.

The survey also revealed that grade 7, used drugs more than grades 8 and 9. About 42.7% (CI, 35.72-49.8), 30.4% (CI, 24.5-36.4) and 24.2% (CI, 19.2 – 29.2) grades 7, 8 and 9 respectively had used drugs one or more times during their life. In addition, the grade 7s had used marijuana or hashish (more than the grades 8 and 9. In fact 42.7% (35.3 –50.1), 27.9% (19.7 – 36.1) and 22.0% (15.9 – 28.1) grades 7, 8 and 9 respectively had used marijuana one or more times during their life.

Table 7. Alcohol use and other drug use among students, by sex, Zambia, 2003.

		Sex	
	Total % (CI)*	**Male % (CI)**	**Female % (CI)**
Students who where 13 years old or younger when they had their first drink of alcohol other than a few sips	36.4 (32.8-40.0)	34.1 (29.3-38.9)	37.8 (34.7-40.9)
Drank at least one drink containing alcohol on one or more of the past 30 days	42.6 (38.3-46.8)	38.9 (33.2-44.5)	45.5 (41.3-49.8)
Drank one or more drinks per day on the days they drank alcohol during the past 30 days	27.1 (24.3-29.9)	24.5 (20.6-28.4)	28.9 (26.1-31.7)
Usually got the alcohol they drank by buying it in a store, shop, or from a street vendor during the past 30 days.	10.2 (8.5-11.9)	10.9 (8.2-13.5)	10.2 (7.0-13.3)
Drank so much alcohol they were really drunk one or more times during their life	42.4 (38.5-46-3)	38.2 (33.8-42.5)	46.8 (41.8-51.7)
Students who usually drink beer, larger or stout	11.1 (9.6-12.5)	11.0 (9.0-13.0)	11.0 (8.5-13.4)
Had a hang-over, felt sick, got into trouble, missed school, or got into fights one or more times as a result of drinking alcohol during their life	45.1 (42.1-48.0)	40.8 (35.7-45.9)	48.7 (44.1-53.3)
Students who when they watch television, videos or movies see actors drinking alcohol most of the time or always	24.4 (20.3 – 28.4)	24.1 (19.3 – 28.9)	25.3 (20.8 – 29.8)
Students who have seen advertisements for alcohol on billboards during the past 30 days	33.4 (29.7 – 37.2)	31.9 (27.8 – 36.0)	33.8 (29.4 – 38.1)
Students who have had an alcohol company representative offer them a free drink of alcohol	30.0 (26.6 – 33.4)	28.3 (24.7 – 31.9)	32.0 (27.1 – 36.8)
Students who during this school year were taught in any of the classes the dangers of alcohol use	40.9 (36.1-45.6)	43.8 (39.6-47.9)	37.6 (30.0-44.9)
Students who were taught in any of their classes how to tell someone they did not want to drink alcohol during this school year	44.5 (41.1 – 47.9)	45.9 (40.8 – 51.0)	42.5 (38.5 – 46.4)
Students who used drugs such as daga one or more times during their life	36.7 (32.1-41.4)	33.8 (28.5-39.1)	39.2 (33.9-44.5)
Students who have used marijuana or hashish (also called daga, ibange, mbanje, or ichamba one or more times during their life.	35.3 (30.3-40.3)	31.9 (26.4-37.5)	37.8 (31.0-44.6))
Students who were 13 years old or younger when they first tried marijuana or hashish (also called daga, ibange, mbanje or ichamba)	26.5 (22.6-30.4)	24.6 (19.9-29.2)	27.5 (22.4-32.7)

*95% confidence interval.

The study reveals that alcohol consumption among school going children is high. The prevalence of current alcohol use among students (i.e., drinking at least one drink containing alcohol on one or more of the past 30 days) is 42.6%. This prevalence is not significantly different among male students [38.9%, CI (33.2-44.5)] and female students [45.5%, CI (41.3-49.8)]].

Overall, 36.4% of students were 13 years or younger when they had their first drink of alcohol other than a few sips with male students at 41.1% and female students at 37.8%.

42.6% of students drank at least one drink containing alcohol on one or more of the past 30 days with Male students at 38.9% with female students at 45.5%.

10.2% of students usually got the alcohol they drank by buying it in a store, shop, or from a street vendor during the past 30 days with male students at 10.9% and female students at 10.2%.

And a total of 42.4% of students drank so much alcohol that they were really drank one or more times during their life with male students at 38.2% and female students at 46.8% with grade 7 students [46.8%, CI (40.6-52.9)] being significantly more likely to have been really drunk than grade 9 [33.0%, CI (29.5-36.5)]. And also in the age group 16 or older where females [49.9%, CI (42.7-57.0)] were significantly more likely to have drunk more alcohol one or more times during their life than males [35.9%, CI (30.6-41.3)

11.1% of students usually drank beer, larger or stout, with male students at 11.0% and 11.0% of female students.

Overall, 45.1% of students, with 40.8% of male students and 48.7% of female students had a hangover, felt sick, or got into trouble with family or friends, missed school, or got into fights as a result of drinking alcohol one or more times during their life with grade 7 [48.1%, CI (42.1-54.2)] significantly more likely than grade 9 [36.2%, CI (30.8-41.6)].

Overall 24.4% of students ever watched television, videos, or movies and seen actors drinking alcohol most of the time or always with male students at 24.1% and female students at 25.3%.

33.4% of students have seen advertisement for alcohol on billboards during the past 30 days with male students at 31.9% and female students at 33.8%.

30.0% of students have ever had an alcohol company representative offer them a free drink of alcohol with male students at 28.3% and female students at 32.0%.

Overall, 40.9% of students were taught the dangers of alcohol use during the past school year in any of their classes with male students at 43.8% and female students at 37.6%.

Only 44.5% of students were taught in any of their classes how to tell someone they did not want to drink alcohol during the school year with male students at 45.9% and female students at 42.5%.

The study revealed that school-going children abused drugs. Overall percentage of lifetime drug use (using drugs, such as daga, ibange, or ichamba, one or more times during their life) is 36.7%. There is no significant difference between males and females, males [33.8%, CI (28.5-39.1)] Vs females [39.2%, CI (33.9-44.5)]. However, grade 7 students [42.7%, CI (35.7-49.8)] were

significantly more likely to report lifetime drug use than grade 9[24.2%, CI (19.2-29.2)] and more likely than grade 8 [30.4%, CI (24.5-36.4)] though not significant.

Overall, 35.3% of students have used marijuana or hashish (Also called daga, ibange or ichamba) one or more times during their life. Male students [31.9%, CI (26.4 -37.5)] are not significantly different from female students [37.8%, CI (31.0-44.6)] in terms of marijuana or hashish use.

26.5% of students were 13 years old or younger when they first tried marijuana or hashish with male students [24.6%, CI (19.9-29.2)] not significantly different from female students [27.5%, CI (22.4-32.7)]

Sexual Behaviours That Contribute to HIV Infection, Other STI, and Unintended Pregnancy

Sexual behaviour is defined as the reaction or response to sexuality. Sexual behaviour is a factor that predominantly determines the rate of HIV infection, STI's and unintended pregnancy. The GSHS included among other topics, sexual behaviour and how it contributes to HIV infection, STI and unintended pregnancies among students.

Since the epidemic began, more than 60 million people have been infected with HIV. More than half of those newly infected with HIV today are between 15 and 24 years old. Each day, nearly 6,000 becomes infected. An estimated 11.8 million young people aged 15 to 24 are living with HIV and AIDS. HIV infection and AIDS is by far the leading cause of death in sub-Saharan Africa and the 4th leading cause of death worldwide. In many countries, HIV infection and AIDS is reducing average life expectancy, threatening food security and nutrition, dissolving households, overloading the health care system, reducing economic growth and development, and reducing school enrollment and the availability of teachers (29).

Sexually transmitted infections (STI) are among the most common causes of illness in the world and have far-reaching health consequences (30). For example, untreated STI can lead to cervical cancer, pelvic inflammatory diseases, and ectopic pregnancies. Of the estimated 333 million new STI that occur worldwide each year, at least 111 million occur in young people under 25 years of age.

Table 8. Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy among students, by sex, Zambia, 2004.

	Overall % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Students who have ever had sexual intercourse	44.7 (38.7 – 50.8)	54.3 (50.0 – 58.7)	32.6 (23.8 – 41.3)
Students who had sexual intercourse for the first time before age 13 years	26.3 (21.8 – 30.8)	30.3 (25.4 – 35.2)	20.7 (14.1 – 27.4)
Had sexual intercourse with two or more people during their life time	27.9 (23.9 – 31.8)	32.0 (28.6 – 35.5)	23.3 (16.5 – 30.1)
Had sexual intercourse during the past 12 months	13.3 (11.0 – 15.5)	16.2 (13.0 – 19.3)	9.8 (7.2 – 12.4)
Had sexual intercourse with two or more people during the past 12 months	23.1 (18.6 – 27.5)	26.4 (21.3 – 31.6)	17.8 (12.2 – 23.4)
Most of the time or always used a condom when they had sexual intercourse during the past 12 months	11.1 (8.6 – 13.5)	13.1 (9.3 – 16.9)	7.5 (4.2 – 10.9)
Students who used a condom the first time they had sexual intercourse	26.1 (21.0 – 31.1)	29.1 (23.4 – 34.8)	21.8 (16.1 – 27.5)
Students who had sexual intercourse during the past 12 months, those who used a condom the last time they had sexual intercourse	57.1 (49.8 – 64.4)	56.8 (48.3 – 65.4)	NA
Drank alcohol or used other drugs before they had sexual intercourse the last time	17.6 (13.8 – 21.3)	17.1 (12.8 – 21.3)	16.2 (11.6 – 20.8)
Most likely get a condom from a pharmacy, clinic, or hospital if they wanted one	29.4 (26.7 – 32.2)	32.4 (27.8 – 36.9)	26.4 (23.7 – 29.0)

*95% confidence interval.
NA = Not Available – Cell too small for stable estimates

The study revealed that sexual behaviour of students is high (44.7%). This indicates that almost half of the students in senior primary and junior secondary schools in the country have had sexual intercourse.

The study also revealed that 26.3% of the students had had sex before reaching the age of 13. This means that the exposure to sex is at an early age; for most of them just at or before puberty is reached. 27.9% of the students had sexual intercourse with two or more people during their lifetime and 23.1% had sexual intercourse with two or more people in the last 12 months. In addition, of the 23.1% of the students who had sexual intercourse with two or more partners during the past 12 months, only one in ten (11.1%) of these students used a condom most of the time or always during sexual intercourse. so condom use was very low.

Although, only about 11.1% always or most of the time used a condom when they had sexual intercourse in the last 12 months, 57.1% of them used a condom the last time they had sexual intercourse. The high percentage in condom use (57.1%) can be attributed to increased knowledge in the relevance of condom use among the students.

The older students also were more likely to indulge in sexual intercourse especially in the 16-year or older age group. i.e. 16 year or older [56.8%, CI (49.2-64.3)] Vs the 13-15 year olds [38.0%, CI (30.8-45.2)].

Overall, in whatever category sexual intercourse was conducted, it was discovered that the male students were more indulgent in sexual intercourse as compared to the female students.

HIV-Related Knowledge

Since the epidemic began, more than 60 million people have been infected with HIV. More than half of those newly infected with HIV today are between 15 and 24 years old. Each day, nearly 6,000 people become infected. With an estimated 11.8 million young people aged 15 to 24 are living with HIV and AIDS (31). HIV/ AIDS is by far the leading cause of death in sub-Saharan Africa and the 4th leading cause of death worldwide. In many countries, HIV/ AIDS is reducing average life expectancy, threatening food security and nutrition, dissolving households, overloading the health care system, reducing economic growth and development, and reducing school enrollment and the availability of teachers.

The survey included among other topics, knowledge on HIV/AIDS among the students. Equipping youths with HIV/AIDS related knowledge is vital as it enables or positively influences the young people in making the right choices in the event of HIV/AIDS and thus, mitigate its impact in the country.

Table 9. HIV-related knowledge, by sex, Zambia, 2004.

		Sex	
	Total % (CI)*	**Male % (CI)**	**Female % (CI)**
Ever been told by a doctor or nurse that they had a sexually transmitted infection, such as HIV/AIDs, syphilis, bolabola, or gonorrhea	28.7 (25.8 – 31.6)	29.7 (25.4 – 34.0)	27.5 (25.1 – 30.0)
Know how to tell someone they do not want to have sexual intercourse with them	49.0 (44.5 – 53.6)	50.5 (45.8 – 55.2)	47.1 (41.2 – 52.9)
Believe a healthy looking person can be infected with HIV	44.8 (41.0 – 48.6)	45.1 (40.9 – 49.3)	44.2 (39.5 – 48.8)
Students who, during this school year, were taught in any of their classes about HIV or AIDS	47.4 (41.1 – 53.6)	48.4 (42.5 – 54.3)	46.3 (38.3 – 54.3)
Students who, during this school year were taught in any of their classes where to get tested for HIV	41.1 (36.3 – 45.8)	37.9 (33.0 – 42.8)	43.0 (37.4 – 48.6)
Students who, during this school year, were taught in any of their classes the benefits of not having sexual intercourse	42.8 (37.3 – 48.2)	41.8 (36.3 – 47.4)	44.3 (38.6 – 49.9)
Students who, during this school year, were taught in their classes how to tell someone they do not want to have sexual intercourse with them	42.3 (38.6 – 46.0)	42.4 (37.9 – 46.9)	41.9 (37.2 – 46.5)
Students who, during this school year, were taught in any of their classes how to use a condom	41.4 (38.2 – 44.7)	41.6 (37.2 – 46.1)	39.6 (35.4 – 43.8)

*95% confidence interval

According to the survey, less than half of the students (47.4%)were taught in their classes about HIV or AIDS during this school year with male students at 48.4% and female students at 46.3%. The low percentage of students exposed to HIV/AIDS knowledge in the schools is clear indication that the government needs to do more in ensuring that all schools in the country include HIV/AIDS education as part of the Curriculum.

Of all the respondents, 28.7% had been told by a doctor or nurse that they had a sexually transmitted infection such as HIV/AIDS, syphilis, bola bola or gonorrhea. This means that the students are indulging in sexual activities and hence at an increased risk of HIV infection.

Overall, the study revealed that the students had a grasp of HIV/AIDS related issues as it reveals that 47.4% were taught about HIV/AIDS in their schools. 44.8% believed a healthy looking person can be infected with HIV, 41.1% knew where to get tested for HIV, 42.8% were taught the benefits of not having sexual intercourse, 42.3% were taught how to say no to sex and 41.4% were taught how to use a condom.

Physical Activity

Participating in adequate physical activity throughout the life span and maintaining normal weight are the most effective ways of preventing many chronic diseases, including cardiovascular disease and diabetes (13). The prevalence of type 2 Diabetes is increasing globally and now is occurring during adolescence and childhood (14). Participating in adequate physical activity also helps build and maintain healthy bones and muscles, control weight, build lean muscle, reduce fat, reduce feelings of depression and anxiety, and promote psychological well being (15).

Table 10. Physical activity among students, by sex, Zambia, 2004.

	Overall % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Physically active all seven days for a total of at least 60 minutes per day during the past seven days	9.7 (7.7 – 11.7)	8.7 (6.4 – 11.0)	10.9 (8.4 – 13.4)
Students who were physically active seven days for a total of at least 60 minutes per day during a typical or usual week	9.0 (7.3 – 10.6)	8.4 (6.3 – 10.5)	9.8 (7.6 – 11.9)
Students who participated in physical activity for a total of at least 60 minutes per day on five or fewer days on average	90.2 (88.4 – 92.1)	91.4 (89.3 – 93.6)	89.1 (87.0 – 91.3)
Students who, who during this school year were taught in any of the classes the benefits of physical activity	48.3 (44.2 – 52.4)	49.3 (44.1 – 54.4)	46.7 (41.5 – 51.8)
Students who spent three or more hours per day sitting, and watching television, playing computer games, talking with friends, or doing other sitting activities, such as playing draft, story telling, or listening to music during a typical or usual day	31.8 (29.1 – 34.4)	31.1 (27.1 – 35.1)	32.5 (28.9 – 36.1)
Students who did not walk or bicycle to and from school during the past seven days	36.5 (33.3 – 39.7)	37.3 (32.3 – 42.3)	35.6 (31.7 – 39.6)
Students who usually take less than 29 minutes to get to and from school each day during the past seven days	74.9 (72.5 – 77.3)	76.0 (73.2 – 78.8)	73.6 (70.4 – 76.8)
Students who walked or bicycled to and from school for a total of 150 minutes or more during the past seven days	89.3 (87.4 – 91.2)	89.8 (86.6 – 92.9)	88.7 (87.2 – 90.2)
Students who were taught in any of their classes the benefits of physical activity during the past school year	48.3 (44.2 – 52.4)	49.3 (44.1 – 54.4)	46.7 (41.5 –51.8)

*95% confidence interval.

Only 9.7% of the total number of students, with 8.7% males and 10.9% females were physically active all seven days for a total of at least 60 minutes per day during the past seven days.

Overall, 9.0% of students were physically active 7 days during a typical or usual week for a total of at least 60 minutes per day with male students at 8.4% and female students at 9.8%.

Overall, 90.2% of students participated in insufficient physical activity (i.e., participated in physical activity for a total of at least 60 minutes per day on five or fewer days on average) with male students at 91.4% and female students at 89.1%.

31.8% of students of which 31.1% were male and 32.5% female spent three or more hours per day sitting and watching television, playing computer games, talking with friends, or doing other sitting activities, such as playing draft, story telling, or listening to music during a typical or usual day.

36.5% of students did not walk or bicycle to and from school during the past 7 days with male students at 37.3% and female students at 35.6%.

74.9% of students usually took less than 29 minutes to get to and from school each day during the past 7 days with male students at 76.0% and female students at 73.6%.

89.3% of students walked or bicycled to and from school for a total of 150 minutes or more during the past seven days with male students at 89.8% and female students at 88.7%.

Only 48.3 of students were taught in any of their classes the benefits of physical activity during the past school year with Male students at 49.3% and females at 46.7%.

Protective Factors

For most adolescents, school is the most important setting outside of the family. School attendance is related to the prevalence of several health risk behaviors including violence and sexual risk behaviors (16-18). Students' perceptions of the school environment are associated significantly to their health and well being (19-20). Perceived high-level support from fellow students is related to subjective health complaints, satisfaction with school, and increased physical activity (21-22).

One of the most reliable and powerful findings in research on adolescence and their families is the importance of adequate regulation of adolescents, measured in terms of supervision, monitoring, rule-setting, and other forms of behavioral control (23-25). Without adequate regulation and monitoring, children do not learn to self-regulate, tend to be impulsive, prone to risk taking, more susceptible to peer influences, and more likely to engage in various health risk behaviors including alcohol use and sexual risk behaviors (26). Parental bonding and connection is associated with lower levels of depression and suicidal ideation, alcohol use, sexual risk behaviors, and violence (27).

Table 11. Protective factors among students, by sex, Zambia, 2004.

	Overall % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Students who missed classes or school without permission on one or more of the past 30 days	58.5 (55.0 – 62.1)	58.1 (54.3 – 61.8)	57.8 (51.9 – 63.7)
Most of the students in their school were kind and helpful most of the time or always during the past 30 days	27.9 (24.8 – 31.1)	24.9 (21.3 – 28.5)	31.2 (27.5 – 35.0)
Students whose parents or guardians checked to see if their homework was done most of the time or always during the past 30 days	33.2 (29.8 – 36.7)	31.1 (28.1 – 34.2)	37.3 (32.0 – 42.6)
Students whose parents or guardians understood their problems and worries most of the time or always during the past 30 days	31.7 (28.1 – 35.3)	31.3 (27.1 – 35.4)	32.8 (28.5 – 37.2)
Students whose parents or guardians really knew what they were doing with their free time most of the time or always during the past 30 days	35.2 (31.2 – 39.2)	33.6 (28.8 – 38.5)	37.4 (32.1 – 42.6)

*95% confidence interval.

Missing class or school without permission can be determined especially when students miss class and at the same time they are not at home. They could be involved in all sorts of bad behaviour. In this survey it was found that more than half (58.5%) of the students missed class or school without permission on one or more of the past 30 days.

Students enjoy the school atmosphere when everyone feels that most of their friends are kind and helpful. Unfortunately in this survey very few students (27.9%) of which 24.9% were male and 31.2% female reported that most of the students in their school were kind and helpful most of the time or always during the past 30 days.

When parents or guardians check to see student's homework it gives students encouragement. They feel that they have some attention at least. But less than half of the students (33.2%) reported that their parents or guardians checked to see if their homework was done most of the time or always during the past 30 days out of which 31.1% were male and 37.3% female.

Less than half of the students (31.7%) reported that parents or guardians understood their problems and worries most of the time or always during the past 30 days. The grade 9 students reported to have been more likely to have their problems and worries understood than grade 7, i.e. grade 9 [(38.1%, CI (32.9 – 43.3)] vs. grade 7 [(28.4%, CI (24.1 – 32.3)].

Knowing what students are doing with their free time might assist parents or guardians to monitor their activities and behaviours. In this survey not many parents or guardians (35.2%) knew what they were doing with their free time most of the time or always during the past 30 days and out of these 33.6% were male students and 37.4% for females.

Conclusions and Recommendations

A general observation among the field teams was the clear differences in the comprehension and ability levels to complete the questionnaire in the allocated time, among the urban and rural schools. While this was not one of the survey aims,
We feel it may be useful to reflect the apparent lower ability to comprehend and complete the questionnaire in the allocated one "class period" in the rural schools. Could this mean that standards are higher in urban schools and lower in the rural schools. If this view is supported then it means the Ministry of Education will have to embark on a plan to uplift the standards in the rural schools.

Besides expected and down to earth findings, the study found a number of interesting and startling things among the study population.

Among the expected findings are low nutrition levels in the study population. A good number of the pupils were always hungry. This is expected in a country with high poverty levels like Zambia. This finding is supported by a recent CSO study, Living Conditions Monitoring Survey 2003. It falls on the Ministry of Education to mitigate this by strengthening school feeding programmes as well as promoting Production Units in schools across the country.

The study also found low levels of physical activity among the pupils and less than half of the respondents had been taught about the importance of physical education at school. The authorities at Ministry of Education may tackle this problem by providing emphasis to this aspect among the teaching staff.

Interesting findings include, the high consumption levels of alcohol as well as the early (age of) indulgence in consumption. The study reveals that a big number of pupils engage in beer drinking. This is risky behavior as alcohol may influence these young and un initiated age group to dangerous practices such as un protected sex. The government machinery in general should put in place policies, regulations and practices that reduce beer consumption among school children. The parents and teachers have a big role to play too, they as guardians and care takers should strictly guard pupils against this habit.

Consumption of the drug dagga was found to be high in the study population. Furthermore, the starting age of dagga use is at times at the tender age of less than 13 years. This scenario ought to be reversed. Government should put up policies and programmes that reduce drug use. Parents and teachers should teach children about drug use and its consequences.

Sexual practices were found to be high among the pupils and in line with the ZDHS findings, sexual indulgency is sometimes began at the tender age of less than 13 years. A recent CSO study Zambia Sexual Behaviour Survey also confirms this. This situation is alarming in the era of HIV/AIDS. The onus lies on all stakeholders in the fight against HIV/AIDS to extend and strengthen the Knowledge Attitude and Practices on HIV/AIDS among the school population.

The school system should strength further the teaching of HIV/AIDS in school. The parents and guardians should also work harder towards educating the youth on such issues.

Probably the most startling finding was on suicide. It was found that a very huge number of the studied population contemplated committing suicide, what is more a big number also had at one time or another devised a plan for implementing suicide.
The solution to this disturbing scenario would be to put up conditions and policies that prevent the young ones from extreme frustration, hopelessness and anxiety that tempt young ones to contemplate suicide. Players in this role include government parents and non-governmental organizations that are concerned with the welfare of children.

Finally it would be useful to carry out this study periodically in order to track how results change over time.

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Appendix

1. **Questionnaire**
2. **GSHS Zambia Fact Sheet**

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